BRUHATH BENGALURU MAHANAGARA PALIKE

QUALITY CONTROL TEST REPORT

Name of Work: Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no - 02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Civil Prime Consultants & Engineers

No.23,Shivakrupa CKM Road,Near Akai Public School,RMV 2ND Stage,Sanjar Nagar Bangalore-560094

CIVIL PRIME CONSULTANTS & ENGINEERS
(Project Management Services)
An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

QC ABSTRACT

ameof Work:Restoration and Improvements of roads at Hesaraghatta main road, G Ramaiah layout, Sai Archade layout, Vijaya Bank ut, AdityanagaraPhase-02 and surrounding areas in Ward No.03 of Yelahanka New town Sub Division (Package No-09), BBMP, ngalore.

Sl. No.	Item	Quantity As Per BOQ	Required No's of testes	Actual No's of testes	Testes	Frequency
1	1:4.8	872.39 Cum	1	1	Cement Sand, Aggregates	One Test Per Lot
3	M20	1707.66 Cum	38	38	Concrete Cube Compressive Strength	-
2	Dry lean concrete	101.35 cum	1	1	Concrete Cube Compressive Strength	-
4	M30	101.35 cum	5	5	Concrete Cube Compressive Strength	-
5	Steel	101.74 Tonne	1	1	-	-
	Slab (100mm)	4404.56 Sqm	1	1	Concrete Core Compressive Strength	-
7	Slab (230mm)	404.28 Sqm	1	1	Concrete Core Compressive Strength	-
	Kerb	9706 Nos	1	1	Concrete Core Compressive Strength	-
	GSB	4567.07 Cum	1	1	-	-
	WMM	6089.43Cum	-	-	-	-
		Gradation	31	31	-	-
		AIV	6	6	-	-
		Shape Test	13	13	-	-
		Atterberg Limits	31	31	-	-
	DBM	1542.05 Cum	-	-	-	-
		Quality of Binder	1	1	-	-
		AIV	1	1	-	-
		Shape Test	1	1	-	-
		Gradation	1	1	-	-
		Specific Gravity	1	1	-	-
		Stability of Mix	1	1	-	-
		Bitumen content	1	1	-	-

AE-2
A.E.E

AE-02

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 18.02.2022

TEST REPORT

CLIENT	:	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	:	**Sri. K Venkataraju,** Contractor, Bangalore.
NAME OF THE WORK	:	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
SAMPLE ID	:	Cement (Zuari OPC 53 Grade)
DATE OF MANUFACTURE		January - 2022
DATE OF TESTING		16.02.2022 to 18.02.2022
SAMPLES SUPPLIED BY	:	AGENCY

AE-2

A.E.E

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 269-2015
1	a) Initial Setting Time	IS-4031 (Part -5)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	330 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	29.00 %	-

Note:

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 17.02.2022

TEST REPORT ON FINE AGGREGATES (SAND)

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of Work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Date of Testing : 17.02.2022

IS Code : IS 383:2016

: IS 2386 (Part 1):1963(RA 2011)

Material : Sand

AE-2

A.E.E

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	89	8.90	8.90	91.1	90-100
2.36	126	12.60	21.50	78.5	75-100
1.18	182	18.20	39.70	60.3	55-90
600 Micron	165	16.50	56.20	43.8	35-59
300 Micron	256	25.60	81.80	18.2	8-30
150 Micron	138	13.80	95.60	4.4	0-10

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Authorised Signatory

CIVIL PRIME CONSULTANTS & ENGINEERS

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 17.02.2022

TEST REPORT ON COARSE AGGREGATES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of Work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Date of Testing : 17.02.2022

Code : IS 383:2016

AE-2 : IS 2386 (Part 1):1963(RA 2011)

Material : 20mm Aggregates

A.E.E

Total Wt. of Aggregates in gms= **5000**

s Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	189	3.8	3.8	96.2	95-100
10	2436	48.7	52.5	47.5	25-55
4.75	1958	39.2	91.7	8.3	0-10

ote:

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22

Date : 17.02.2022

TEST REPORT OF PHYSICAL PROPERTIES OF REINFORCEMENT STEEL

Client — **Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.**

Name of Work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

AGENCY — **Sri. K Venkataraju, Contractor, Bangalore.**

Steel Dia/Length : 10mm,12mm " Fe500 TMT Bars"

Reference to BIS codes : IS 1786:2008(RA 2013) High Strength Deformed Steel Bars and Wires for Concrete Reinforcement-Specification

: IS 1608:2005 Metallic Materials- Tensile Testing at Ambient Temperature

AE-2

A.E.E

Date of test : 17.02.2022

S.No	Brand	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH			
				0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation, percent on gauge length
1	TMT	10	0.618	568	656	1.15	15
2	TMT	12	0.889	575	668	1.16	14.5

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AE-02

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 28.02.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.02.2022	28.02.2022	8.165	332.3	14.77
2	21.02.2022	28.02.2022	8.152	345.2	15.34
3	21.02.2022	28.02.2022	8.146	356.2	15.83

Note:

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 21.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on : 28th day

A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.02.2022	21.03.2022	8.165	502.2	22.32
2	21.02.2022	21.03.2022	8.146	512.2	22.76
3	21.02.2022	21.03.2022	8.152	484.9	21.55

Note:

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22

Date: 21.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on : 28th day A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.02.2022	21.03.2022	8.174	505.2	22.45
2	21.02.2022	21.03.2022	8.156	513.2	22.81
3	21.02.2022	21.03.2022	8.138	484.9	21.55

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 28.02.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on : 7th day

A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.02.2022	28.02.2022	8.168	339.3	15.08
2	21.02.2022	28.02.2022	8.174	345.5	15.36
3	21.02.2022	28.02.2022	8.156	352.6	15.67

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AE-02

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22

Date: 22.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.02.2022	22.03.2022	8.198	502.2	22.32
2	22.02.2022	22.03.2022	8.165	480.6	21.36
3	22.02.2022	22.03.2022	8.146	488.9	21.73

Note:

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 01.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on : 7th day

A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.02.2022	01.03.2022	8.199	326.3	14.50
2	22.02.2022	01.03.2022	8.184	335.2	14.90
3	22.02.2022	01.03.2022	8.165	345.2	15.34

Note:

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 22.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 → M_{20}

Compressive Strength as on A.E.E 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.02.2022	22.03.2022	8.174	505.2	22.45
2	22.02.2022	22.03.2022	8.156	511.3	22.72
3	22.02.2022	22.03.2022	8.138	489.6	21.76

Note:

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 01.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 → M_{20}

Compressive Strength as on : 7th day A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.02.2022	01.03.2022	8.188	326.3	14.50
2	22.02.2022	01.03.2022	8.169	335.2	14.90
3	22.02.2022	01.03.2022	8.175	346.5	15.40

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AE-02

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CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 23.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on A.E.E 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.2.2022	23.03.2022	8.184	508.2	22.59
2	23.2.2022	23.03.2022	8.165	516.3	22.95
3	23.2.2022	23.03.2022	8.159	484.9	21.55

Note:

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Authorised Signatory

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 23.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.2.2022	23.03.2022	8.170	505.2	22.45
2	23.2.2022	23.03.2022	8.156	516.3	22.95
3	23.2.2022	23.03.2022	8.138	484.9	21.55

Note:

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For CIVIL PRIME CONSULTANTS & ENGINEERS

Authorised Signatory

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 02.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.2.2022	02.03.2022	8.154	345.2	15.34
2	23.2.2022	02.03.2022	8.128	336.3	14.95
3	23.2.2022	02.03.2022	8.135	325.8	14.48

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 02.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20} A&C-2

Compressive Strength as on 7th day A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	23.2.2022	02.03.2022	8.184	345.2	15.34
2	23.2.2022	02.03.2022	8.169	362.3	16.10
3	23.2.2022	02.03.2022	8.152	345.2	15.34

Note:

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 24.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

AE-2 A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	24.02.2022	24.03.2022	8.168	501.2	22.28
2	24.02.2022	24.03.2022	8.184	492.6	21.89
3	24.02.2022	24.03.2022	8.159	484.6	21.54

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Certified AE-02

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 03.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

AE-2 A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	24.02.2022	03.03.2022	8.168	336.3	14.95
2	24.02.2022	03.03.2022	8.184	345.2	15.34
3	24.02.2022	03.03.2022	8.156	356.8	15.86

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CIVIL PRIME CONSULTANTS & ENGINEERS

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 25.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AB-2 : M_{20}

Compressive Strength as on A.E.E 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2022	25.03.2022	8.198	500.3	22.24
2	25.02.2022	25.03.2022	8.165	475.5	21.13
3	25.02.2022	25.03.2022	8.146	489.6	21.76

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(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 04.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 → M_{20}

Compressive Strength as on 7th day

A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2022	04.03.2022	8.169	335.3	14.90
2	25.02.2022	04.03.2022	8.184	346.5	15.40
3	25.02.2022	04.03.2022	8.155	352.8	15.68

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 25.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on A.E.E 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2022	25.03.2022	8.154	505.2	22.45
2	25.02.2022	25.03.2022	8.149	513.5	22.82
3	25.02.2022	25.03.2022	8.136	484.9	21.55

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 04.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on A.E.E 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2022	04.03.2022	8.184	356.3	15.84
2	25.02.2022	04.03.2022	8.169	336.2	14.94
3	25.02.2022	04.03.2022	8.152	346.5	15.40

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 25.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{20}

Compressive Strength as on A.E.E 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2022	25.03.2022	8.184	475.8	21.15
2	25.02.2022	25.03.2022	8.169	489.6	21.76
3	25.02.2022	25.03.2022	8.154	506.3	22.50

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AE-02

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 26.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 → M_{20}

Compressive Strength as on A.E.E 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.02.2022	26.03.2022	8.188	505.2	22.45
2	26.02.2022	26.03.2022	8.169	516.3	22.95
3	26.02.2022	26.03.2022	8.156	484.9	21.55

Note:

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AE-2

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An ISO 9001-2015 Certified Company
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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 05.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.**

Agency : **Sri. K Venkataraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete AE-2 : M_{30}

Compressive Strength as on A.E.E 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.02.2022	05.03.2022	8.165	526.3	23.39
2	26.02.2022	05.03.2022	8.128	508.2	22.59
3	26.02.2022	05.03.2022	8.149	516.4	22.95

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 05.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.**

Agency : **Sri. K Venkataraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30}

Compressive Strength as on 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.02.2022	05.03.2022	8.165	502.2	22.32
2	26.02.2022	05.03.2022	8.132	489.6	21.76
3	26.02.2022	05.03.2022	8.144	516.3	22.95

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 26.03.2022

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client : **Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.**

Agency : **Sri. K Venkataraju, Contractor, Bangalore.**

Name of the work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{30} AE-2

Compressive Strength as on : 28th day A.E.E

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.02.2022	26.03.2022	8.165	700.9	31.15
2	26.02.2022	26.03.2022	8.138	716.5	31.84
3	26.02.2022	26.03.2022	8.146	728.1	32.36

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AE-02

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No: CACE/BBMP/KV/W.No.02/2021-22 Date : 09.03.2022

GRADATION FOR GSB (Grading V)

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

BIS Code : IS 2386 Part (1):1963
: IS 2720 part (5):1985

Date of Testing : 07.03.2022 to 09.03.2022

Oven Dry Wt (gm) : 13000

AE-2
A.E.E

TABLE – 1

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirements as per MORTH 5th edition table 400.1
75	0	0	0.00	100	100
53	752	752	5.78	94.22	80-100
26.5	2162	2914	22.42	77.58	55-90
9.5	2085	4999	38.45	61.55	35-65
4.75	1892	6891	53.01	46.99	25-50
2.36	3692	10583	81.41	18.59	10-20
0.85	1758	12341	94.93	5.07	2-10
0.425	224	12565	96.65	3.35	0-5

AE-02

For CIVIL PRIME CONSULTANTS & ENG.

Authorised Signatory

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985
Date of Testing : 10.03.2022 to 12.03.2022
Material Type : Wet Mix Macadam

AE-2

A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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For CIVIL PRIME CONSULTANTS & ENGINEERS

AE-02

Authorised Signatory

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985
Date of Testing : 10.03.2022 to 12.03.2022
Material Type : Wet Mix Macadam

AE-2
A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	20.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985
Date of Testing : 10.03.2022 to 12.03.2022
Material Type : Wet Mix Macadam

AE-2

A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	21.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
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Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985
Date of Testing : 10.03.2022 to 12.03.2022
Material Type : Wet Mix Macadam

AE-2
A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

ATTERBERG LIMITS TEST FOR WMM

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Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
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IS Code: : IS 2720(Part 5):1985
Date of Testing : 11.03.2022 to 13.03.2022
Material Type : Wet Mix Macadam

AE-2

Sl. No.	A.E.E Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22

Date : 13.03.2022

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Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

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IS Code: : IS 2720(Part 5):1985

Date of Testing : 11.03.2022 to 13.03.2022

Material Type : Wet Mix Macadam

AE-2

A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.50	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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For CIVIL PRIME CONSULTANTS & ENGINEERS

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

ATTERBERG LIMITS TEST FOR WMM

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Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 11.03.2022 to 13.03.2022

Material Type : Wet Mix Macadam

AE-2

A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	22.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

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AE-02

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Authorised Signatory

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(Project Management Services)

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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985

Date of Testing : 11.03.2022 to 13.03.2022

Material Type : Wet Mix Macadam

AE-2

A.E.E

Sl. No.	Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	21.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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AE-02

For CIVIL PRIME CONSULTANTS & ENGINEERS

Authorised Signatory

No.23, Shivakrupa CKM Road, Near Akai Public School, RMV 2nd Stage, Sanjay Nagar Bangalore-560094 Email:civilprimeconsultants@gmail.com

CIVIL PRIME CONSULTANTS & ENGINEERS
(Project Management Services)
An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

ATTERBERG LIMITS TEST FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work :Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2720(Part 5):1985
Date of Testing : 11.03.2022 to 13.03.2022
Material Type : Wet Mix Macadam

AE2

Sl. No.	A.E.E Particulars	Test Results	Requirement as per MORTH 5th edition Cl.406.2.1.2
1	Liquid Limit	19.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:
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Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 13.03.2022

Aggregate Impact Value

Client	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Sri. K Venkataraju,** Contractor, Bangalore.
Name of the Work	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
IS Code	IS 2386 (Part 4):1963(RA 2011)
Type of Mix	Wet Mix macadam
Date of Testing	13.03.2022

AE-2

A.E.E

Sl No.	Details	Test No. 1	Test No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	84	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	296	296	
4	Aggregate Impact value = percent fines 100^* $(W_2/W_1)\%$	22.11	22.51	22.31

Comments:
→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%(As per MORTH Specication table 400.12)

Note:
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For CIVIL PRIME CONSULTANTS & ENGINEERS

AE-02

Authorised Signatory

No.23, Shivakrupa CKM Road, Near Akai Public School, RMV 2nd Stage,
Sanjay Nagar Bangalore-560094 Email:civilprimeconsultants@gmail.com

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)
Date of Testing : 12.03.2022
Material Type : Wet Mix Macadam

AE-2

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	195	195	2.0	98.1	95-100
22.4	2456	2651	26.5	73.5	60-80
11.2	2158	4809	48.1	51.9	40-60
4.75	1830	6639	66.4	33.6	25-40
2.36	1168	7807	78.1	21.9	15-30
0.600	525	8332	83.3	16.7	8-22
0.075	1358	9690	96.9	3.1	0-5

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AE-02

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An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency : **Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)
Date of Testing : 12.03.2022
Material Type : Wet Mix Macadam

AE2
A.E.E

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	195	195	2.0	98.1	95-100
22.4	2456	2651	26.5	73.5	60-80
11.2	2158	4809	48.1	51.9	40-60
4.75	1830	6639	66.4	33.6	25-40
2.36	1168	7807	78.1	21.9	15-30
0.600	525	8332	83.3	16.7	8-22
0.075	1358	9690	96.9	3.1	0-5

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

GRADATION FOR WMM

Client : **Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Sri. K Venkataraju,** Contractor, Bangalore.

Name of Work : Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.

IS Code: : IS 2386 (Part 1):1963(RA 2011)

Date of Testing : 13.03.2022

Material Type : Wet Mix Macadam

AE-2

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	184	184	1.8	98.2	95-100
22.4	2426	2610	26.1	73.9	60-80
11.2	2180	4790	47.9	52.1	40-60
4.75	1856	6646	66.5	33.5	25-40
2.36	1168	7814	78.1	21.9	15-30
0.600	525	8339	83.4	16.6	8-22
0.075	1298	9637	96.4	3.6	0-5

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AE-02

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

GRADATION FOR WMM

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gency : **Sri. K Venkataraju,** Contractor, Bangalore.

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S Code: : IS 2386 (Part 1):1963(RA 2011)

ate of Testing : 13.03.2022

aterial Type : Wet Mix Macadam

AE-2

Oven Dry.Wt, gran 10000

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	184	184	1.8	98.2	95-100
22.4	2426	2610	26.1	73.9	60-80
11.2	2180	4790	47.9	52.1	40-60
4.75	1856	6646	66.5	33.5	25-40
2.36	1168	7814	78.1	21.9	15-30
0.600	525	8339	83.4	16.6	8-22
0.075	1298	9637	96.4	3.6	0-5

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

GRADATION FOR WMM

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gency : **Sri. K Venkataraju,** Contractor, Bangalore.

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Code: : IS 2386 (Part 1):1963(RA 2011)

te of Testing : 13.03.2022

aterial Type : Wet Mix Macadam

AE-2

Oven Dry.Wt, gran 10000

s Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Requirement as per MORTH 5th edition table no 400.13
53	0	0	0	100	100
45	172	172	1.7	98.3	95-100
22.4	2435	2607	26.1	73.9	60-80
11.2	2162	4769	47.7	52.3	40-60
4.75	1839	6608	66.1	33.9	25-40
2.36	1152	7760	77.6	22.4	15-30
0.600	549	8309	83.1	16.9	8-22
0.075	1362	9671	96.7	3.3	0-5

A.E.E

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For CIVIL PRIME CONSULTANTS & ENGINEERS

AE-2

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CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	12.03.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	10.90	11.20	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.60	12.80	
	Combined Flakiness & Elongation index	23.50	24.00	

Note:

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 12.03.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	12.03.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	10.90	11.20	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.60	12.80	
	Combined Flakiness & Elongation index	23.50	24.00	

AE-2
A.E.E

Note:

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→ The results indicated above are based on the tests carried out on the samples collected at the site.
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AE-2

For CIVIL PRIME CONSULTANTS & ENGINEERS

Authorised Signatory

No.23, Shivakrupa CKM Road, Near Akai Public School, RMV 2nd Stage, Sanjay Nagar Bangalore-560094 Email:civilprimeconsultants@gmail.com

CIVIL PRIME CONSULTANTS & ENGINEERS

(Project Management Services)

An ISO 9001-2015 Certified Company
Ph.No: 9535393237 / GST IN:29ALSPU0596Q1ZO

Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	13.03.2022

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.30	11.50	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.90	13.30	
	Combined Flakiness & Elongation index	24.20	24.80	

AE-2

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AE-02

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date : 13.03.2022

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Sri. K Venkataraju,** Contractor, Bangalore.
Name of Work	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
BIS code:	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	13.03.2022

AE2

A.E.E

Sl no	Test	1	2	Requirements as per MORTH 5th edition table no 400.12
1	Flakiness Index %	11.30	11.50	Combined Flakiness & Elongation index Max 35%
2	Elongation Index %	12.90	13.30	
	Combined Flakiness & Elongation index	24.20	24.80	

Note:

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AE-02

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 14.03.2022

Aggregate Gradation Test

Client	**Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.**
Agency	**Sri. K Venkataraju, Contractor, Bangalore.**
Name of the Work	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
BIS Code	IS 2386(Part 1):1963(RA 2011)
Sample I / D	Hot mix Plant, Bangalore.
Type of Mix	Dense Graded Bituminous Macadam
Date of Testing	14.03.2022

Total Weight of Sample: **10000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.10	Remarks
37.50	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
26.50	715	7.2	7.15	92.85	90 - 100	
19.00	1265	12.7	19.80	80.20	71 - 95	
13.20	1385	13.9	33.65	66.35	56 - 80	
4.75	2514	25.1	58.79	41.21	38 - 54	
2.36	1097	11.0	69.76	30.24	28 - 42	
0.300	1319	13.2	82.95	17.05	7 - 21	
0.075	1156	11.6	94.51	5.49	2 - 8	

AE-2

Total Weight of Sample: **10000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Requirement as per MORTH table 500.10	Remarks
37.5	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
26.5	685	6.9	6.85	93.15	90 - 100	
19	1415	14.2	21.00	79.00	71 - 95	
13.2	1136	11.4	32.36	67.64	56 - 80	
4.75	2415	24.2	56.51	43.49	38 - 54	
2.360	1159	11.6	68.10	31.90	28 - 42	
0.300	1312	13.1	81.22	18.78	7 - 21	
0.075	1174	11.7	92.96	7.04	2 - 8	

For CIVIL PRIME CONSULTANTS & ENGINEERS

AE-02

Authorised Signatory

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Job No.: CACE/BBMP/KV/W.No.02/2021-22 Date: 15.03.2022

TEST REPORT

Client	:	**Assistant Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Sri. K Venkataraju,** Contractor, Bangalore.
Name of the work	:	Restoration and Improvements of Balance main and cross roads of Nagenahalli , Harohalli , Kenchenahalli villages, Srinidhi layout, ISRO layout,KEB layout and surrounding areas in ward no -02. of yelahanka Sub division (PACKAGE NO-02),BBMP, Bangalore.
IS Code	:	IS 73:2013, IS 1203:1978(RA 2008), IS 1205:1978(RA 2009), IS 1208:1978(RA 2009), IS 1209:1978(RA 2009)
Source of location	:	Hot mix Plant, Bangalore, VG 30
Date of testing	:	15.03.2022

The results of the tests conducted on the bitumen sample using for Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 °C, 1/10 mm	48	Min 45
2	Softening point, °C	54	Min. 47
3	Ductility at 27°C, cm	> 100	Min. 40
4	Flash Point, °C	272	Min. 220

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